Climate Change-- So what can I do?

The role for fishermen in a changing climate

If you're like me, you may now just glance at the headlines about the effects of climate change on our natural systems, perhaps reading a bit longer when the findings are about our region's water supply, salmon impacts, or ocean acidification. It's not that I'm fully informed and it's all a repeat, it's that I'm at a loss about what I can do about whatever information is presented.

But finally, after a family vacation filled with nieces and nephews just starting college who want to believe there are jobs such as mine that "help the planet", I'm suspending my cynicism and putting aside my inaction. Taking action requires a willingness to act despite the small scale of effect. Cumulatively, if the millions of us in the sports community took such actions, it would be meaningful, inspire others, and encourage further engagement. None of this is new, but it's time to act, if actions have been put off.

So, finally, I've written as a citizen to my Congressional representatives supporting U.S. achievement of verifiable reductions in its carbon emissions. I've installed the rest of the compact florescent bulbs that were sitting in my closet, put my office equipment on a power strip that can turn everything fully off at night and started working on a new habitat conservation proposal for my watershed group. I urge you and your groups to join me.

For more information on the predictions for the effects of climate change on the region (changes happening faster than predicted), what sportsmen are doing throughout the nation, and for scientific references to documents an excellent resource is the National Wildlife Federation.
http://www.nwf.org/globalwarming/

Action	Rationale	Effect	Some ideas to help
Energy: Commit your household to achieve at least 10% reduction in home energy use, especially reduce use during peak times. Track/ compare energy use by month to last year's bills	Home heating and cooling is a significant contribution to energy grid demands. New power sources are developed and old ones are retained just to meet peak demands. Even a 2º difference in home temp settings (cooler in winter, warmer in summer) can save 2000 lbs of C02 a year	Conservation savings can meet at least 75% of the demand for brining new power sources on-board.	Programmable thermostats, Tax rebates available for insulation, windows, heat pumps. Set water heater temperature to 120º Shower & wash laundry in the evenings

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Water: Commit your household to achieve at least 10% reduction in water use, esp. during summer and fall. Track & compare water use by month to last year's bills; Work with press, local officials to encourage a local water conservation effort. Support or lead efforts to price water to encourage greater conservation.	Municipal water use usually gets priority to in-stream water for fish. At the local level many streams used for water systems are over-appropriated (not enough left for fish) or have temperature and water quality problems. Helping conserve, support each native local run of fish adds resiliency to the population	Measured savings by homeowners can exert pressure on industrial and agricultural users to do the same. As water use increases the price per unit used is often fixed so further conservation is not rewarded and waste not penalized.	Install low flow shower and water faucet heads, reduce lawn extent, mulch plants and use native vegetation, water in early morning only, use hoses with shut off nozzles. Run appliances only with full loads.
Land Conservation: Support efforts to conserve, expand, & strengthen "healthy" habitats Donate to or assist in acquisition and restoration project work by fishing, watershed, or other conservation groups.	The idea of maintaining "resiliency" is that a healthy habitat, like a healthy person, can better resist disease or handle environmental stressors. With increased extremes or flashiness in storm events, drought, sea level rise, and warmer stream temperatures, systems that can "migrate" upland and/or inland, store and release water, and that have diverse species and genetics may help species survive.	There is great interest now in preparing for natural hazards. Protection of important areas for fish/wildlife habitat can also help towns deal with flooding, droughts, and sea level rise (e.g. riparian area protection, floodplain reconnection, dike breaching).	Inventory, preserve, and expand areas with an intact, diverse ecosystem with few exotic species, good water quality etc. enhancing connectivity across the landscape—starting at your local level. Work to increase in-stream woody debris, encourage beavers, establish a diversity of native conifers, hardwoods & shrubs along streams, and survey for and control exotic organisms

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Transportation: Decrease personal fuel use. Let politicians know you support programs that create incentives for electric and other alternative vehicle development & use	More than half of our greenhouse gas emission come from use for transportation.	Unleaded gasoline has 19.6 lbs of CO_2 per gallon so if your car gets 20 mpg, each mile not driven saves about 1 pound of CO2.	Keep tires inflated Don't idle -turn off your engine if you are stopped for more than 10 seconds (e.g. waiting for kids at school or in a drive through line) Use carpools, public transportation more, explore working from home a few days/week.
Resource Conservation: Support conservative fish harvest limits in light of uncertainty and efforts to develop ecosystem based fishery management plans. Support and defend wild fish protection policies Protect the producers (large, older fish, whose eggs & young may be released over longer time periods and be more fit to survive) in marine reserves or through size limits (if post-catch survival is good)	Fish management models need to consider food web/ ocean productivity conditions that can affect stocks and lead to unsustainable levels of fishing in bad ocean years. Production hatchery management leads to genetic simplification of stocks; the robust genetic makeup of wild fish may help survival in a changing climate where run timing, temperature tolerance, and differences in spawning and smolting characteristics may be key A network of properly spaced and cited marine reserves may be needed to protect long lived, relatively sedentary species, especially where spawning is sporadic. Fishing pressure otherwise removes the larger, older fish from the population	Support from user groups allows state agency managers to listen to the recommendations of agency biologists and make any needed tough calls Marine reserve citing is difficult & controversial. Participation of fishermen willing to be open to discussion can result in an outcome that protects important habitat and production areas while avoiding important fishing areas.	Sport fishermen have representation on the Pacific Fishery Management Council and in state agency marine reserve working groups. Find out who the representatives are and express your opinions to them or directly to the decision makers. Get on your state's mailing list to be notified of meetings about harvest or policy decisions.

For science-based research on how household actions can have a significant effect on lowering carbon emissions see the article and especially the supportive information from Vanderbuilt University's Climate Change Research Network: http://www.pnas.org/content/early/2009/10/23/0908738106.full.pdf+html?sid=f5473806-052a-44c2-b7d4-794ee51a3613 and the supportive information: http://www.pnas.org/content/suppl/2009/10/27/0908738106.DCSupplemental/0908738106SI.pdf

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